

GEL'DERMAN, L. S.

Theory of metal rolling. Leningrad, Glav. red. lit-ry po chernoi metallurgii, 1935. (Mic
53-712)

Collation of the original: 90 p.

Microfilm TJ-6

1. Rolling-mill machinery.

Investigation of spreading of alloy steels during rolling
 Cast alloys. Ya. S. Ginzburg and I. S. Gel'derman
Rept. Central Inst. Metals Leningrad No. 18, '32 (1933). The pearlite steels tested are widely used in
 automobile, tractor and turbine work. In all cases, spread
 increased with a drop in rolling temp. The differences
 in spreading between the various steels decreased as the
 temp. rises. The admn. of C, Ni and Cr-Ni to C, Ni and
 Cr-Ni steels, resp., causes an increase in spreading. Cr
 acts more effectively than Ni in spreading of Cr-Ni steels
 II. Z. Kamish

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APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000514620005-8"

Recrystallization of steel during forging. I. M. Pavlov,
L. S. Gel'derman and A. I. Zhukova. *Metallurg* 11, No.
197-2-947 (1967).—Specimens of medium-C steel (20 mm.
in diam. and 30 mm. high) were deformed 4.6% at
800-1150° by a single blow. Deformation was measured
by the change in pitch of special threads cut in the speci-
men. The max. grain size was found near the ends of the
specimens where the deformation was a min. A deforma-
tion of 20% is sufficient to procure the min. grain size ob-
tainable. H. W. Rathmann

Gelderman, L.S.

18(0)

PHASE I BOOK EXPLOITATION

SOV/2301

Metallurgiyai sbornik statey, [no. 1] (Metallurgy; Collection of Articles, No. 1) [Leningrad] Sudpromgiz, 1958. 177 p. 1,500 copies printed.
Resp. Ed.: G. I. Kapyrin, Candidate of Technical Sciences; Ed.: A. V. Popov;
Tech. Ed.: O. I. Kotlyakova.

PURPOSE: This book is intended for engineers and technicians at industrial plants, for scientific personnel at research and educational institutions, and for students of advanced metallurgy.

COVERAGE: The articles in this collection deal with the production and hot forming of steel and titanium ingots. Both theoretical and practical aspects are covered. Topics discussed include: crack formation during thermomechanical treatment, dependence of plasticity of low-carbon chrome-nickel steel on the method of steelmaking, vacuum melting of austenitic stainless steel, beneficial effect of hot deformation on steel properties, vectorial properties of sheet metal as related to rolling conditions, crystallization and ingot structure, present status of titanium-ingot production, etc. Numerous references, principally Soviet, accompany the articles.

Card 1/3

SOV/2301

Metallurgy; Collection (Cont.)

TABLE OF CONTENTS:

| | |
|---|----|
| Andreyev, I. A., Professor, and L. Ya. Gluskin, Candidate of Technical Sciences. The Mechanism of Crack Formation in the Thermomechanical Treatment of Low-carbon Structural Steels | 3 |
| Andreyev, I. A., and L. Ya. Gluskin. Selection of an Optimum Process of Making and Teeming Low-carbon Chrome-nickel Steel with a View to Improving Plasticity | 33 |
| Polin, I. V., Candidate of Technical Sciences, and E. I. Serebriyskiy. Making Austenitic Stainless Steel in Vacuum Arc Furnaces | 63 |
| Vitkup, I. Kh., Engineer. Some Explanations of the Beneficial Effect of Hot Deformation on the Properties of Steel | 71 |
| Gel'derman, L. S. Candidate of Technical Sciences. Vectorial Nature of the Properties of Sheets as Determined by Rolling Conditions | 81 |
| Gayday, P. I. Candidate of Technical Sciences. Crystallization and Ingots Structure | 95 |

Card 2/3

| | |
|---|----------|
| Metallurgy; Collection (Cont.) | SOV/2301 |
| Aleshin, D. V., Engineer. On Certain Characteristics of the Dendritic Crystallization of Medium-Alloy Structural Steel | 115 |
| Polin, I. V., Candidate of Technical Sciences. Development and Present Status of the Production of Titanium and Titanium-Alloy Ingots | 135 |
| Shul'kin, S. M., Candidate of Technical Sciences. Hot-rolled Titanium Tubes | 153 |
| Filin, Yu. A., Engineer. Structure and Properties of Cast Induction-melted Titanium | 167 |

AVAILABLE: Library of Congress

Card 3/3

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Gelderman

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NAME & BOOK INFORMATION

SERIAL#

RECORDED: Serials Library, No. 2 (RECORDED: Collection of Articles, No. 2),
Industries, Supplements, 1950, 200 p. 2,000 copies printed.

Sup. Ed., G.I. Karpov, Candidate of Technical Sciences; Eds.: V. I. Gerasimov
and N. I. Gerasimov; Tech. Eds.: V. I. Trofimkin.

PURPOSE: This collection of articles is intended for technical personnel at
industrial plants and at research and educational institutions. It may also
be used by students taking courses in advanced metallurgy.

CONTENTS: The articles present the following material: original data on the
production of steel in open-hearth, electric, and reverberatory furnaces; informa-
tion on the rolling of steel sheet, wire, tubes, etc.; data on the physical and
problems of investigation of heat and mass transfer; original analysis of
processes of lowering the temperature of liquid steel; some theoretical analysis of
production processes is included; and practical recommendations are given
concerning specific problems. No. of the
articles are accompanied by references.

Editorial Board: Candidate of Technical Sciences, Effect of the Steel-
making Process on the Quality of Automobiles; Electric Steel.

Industries, I. I. P. Professor, and L. I. Gerasimov, Use of Reversing Metal
Sheets in the Smelting of Ferrous Ores; Chemical or the National Metal
Ore Smelting Plant in Kursk and Basic Open-Hearth Steel Works High

Quality Control. 67

Industries, V. I. Gerasimov, Accuracy of Measurements for the Typing
and Rolling Standard of Steel.

89

Industries, V. I. and N. I. Gerasimov, Application of the Magnetic
Gauge Principle for Measuring the Temperature of Liquid Steel.

123

Industries, V. I. Professor, The Possibility of Reducing the Temperature
of Liquid Steel and Steel Pick by a Selected Low-Temperature Ther-
mocouple.

125

Industries, V. I. and N. I. Gerasimov, Magnetic Induction of Reactions
in Steel, Iron, and Steel Products. Magnetic Induction of Reactions
in Steel, Iron, and Steel Products. Magnetic Induction of Reactions
in Steel, Iron, and Steel Products.

126

Industries, V. I. Professor, Reduction of Alloying Elements When the
Alloying of Steel by Carburation in Structural Steel.

128

Industries, V. I. Professor, Reduction of the Strength of Alloyed
Steel by Rolling with Reversing Reduction Along the Width.

129

Industries, V. I. Candidate of Technical Sciences, Micrographing Features
of Rolling in Vacuum Arc Furnaces.

130

Industries, V. I. Professor, On the Theory of Determining the Average
Rolling Power in Rolling With Ginned Rolls.

131

Industries, V. I. Professor, Determination of the Coefficient of Friction
in Rolling Steel With Reversing Reduction Along the Width.

132

Industries, V. I. Candidate of Technical Sciences, Micrographing Features
of Rolling in Vacuum Arc Furnaces.

133

Industries, V. I. and V. I. Gerasimov, Professor, Method of Producing and
Rolling Reduced Carbon Steel Grade for Making Titanium Alloys
and V. I. and V. I. Gerasimov, Professor, Some Process Problems in the
Production of Titanium in Vacuum Arc Furnaces.

134

Industries, V. I. and V. I. Gerasimov, Professor, Methods of Making Addi-
tives for Titanium Alloys.

Industries, V. I., Candidate of Technical Sciences, Rolling of Titanium

135

W/REF ID: A60

GEL'DERMAN, L.S., kand.tekhn.nauk; KUSTOV, A.M., inzh.; PESTOV, V.S., inzh.

Rolling sheets of shaped section. Metallurgiia 2:153-164 '59.
(MIRA 14:3)
(Rolling (Metalwork))

GEL'DERMAN, L.S., kand. tekhn. nauk

Characteristics of sheet macrostructure in relation to the
conditions of rolling. Obr. met. davl. no.5:72-82 '59.
(MIRA 13:3)

(Rolling (Metalwork))

(Sheet metal)

GEL'DERMAN, L.S.; KULYAPINA, E.P.

Effect of upsetting on the macrostructure and mechanical
properties of forgings. Kuz.-shtam.proizv. 1 no.11:1-5
N '59. (MIRA 13:3)

(Forging)

GELDERMAN, L.S.

BOOK BIBLIOGRAPHY 807/5752

Physical Sciences, No. 3 (Physical Materials Collection of Articles, No. 3), Tsvetnoy, Naukograd, 1959, 350 p., 2,200 copies printed.

Ed. G. E. Burov, Candidate of Technical Sciences; Library and Tech. Ed. N. V. Kuznetsov.

This collection of articles is intended for scientific personnel at scientific and technical institutions and industrial plants and also for students and post-graduate students.

Contents: The articles report the results of investigations of 1) the effect of various factors on the susceptibility of materials and heat-resistant steels to brittle failure at various temperatures under various conditions of loading (long-time, short-time, cyclic, cryogenic); 2) allotropic, phase, and condition of alloys as related to their mechanical properties; 3) corrosion resistance and oxidation of materials and heat-resistant steels. No articles are accompanied by numerical Soviet and non-Soviet references. No summaries are contained.

Editor: V. G. and V. A. Burovskii, Engineers.

Subedit. Yu. P. Candidate of Technical Sciences. Thermal Fatigue of Steels.

Contributors: B. I. I. Syrbichov, Engineer; and Yu. N. Rybnikov, Candidate of Technical Sciences. Investigation of the Fracture Strength of Steel.

Contributors: A. V. Ovchinnikov, Candidate of Technical Sciences. Effect of Various Conditions on the Properties of Alpha-Alloys of Titanium.

Contributors: Yu. S. Sosin, Candidate of Two-Phase Alloys of Titanium and Steels, and Yu. S. and G. S. Yu. S. Anomalous Oxidation Growth of Metals in Oxidative Environments.

Contributors: B. I. Rybkin, Candidate of Technical Sciences; Yu. I. Zaripov; and Yu. V. Burov, Candidate of Technical Sciences. Investigation of the Distribution of Elements in Metallic Alloys and the Solubility of Carbon in Alloys.

Contributors: L. Z. Ovchinnikov, Candidate of Technical Sciences; and Yu. I. Rybkin, Candidate of Technical Sciences. Effect of Various Conditions on the Structure and Properties of Metals as Influenced by Thermal Conditions.

Contributors: S. M. Ovchinnikov, Candidate of Technical Sciences; A. I. Zamoshchikov, Candidate of Technical Sciences. Properties of Heat-Resistant Titanium Alloys.

Contributors: Yu. V. Ovchinnikov, Candidate of Technical Sciences. Melting in Circular Furnaces. Study of the Melting of Some Metals.

Contributors: S. Yu. Burovskii and Yu. I. Rybkin, Engineers. Use of the Electron Microscope in Investigations of the Structure of Type A-143 Heat-Resistant Steel at Various Degrees of Susceptibility to Intergranular Corrosion.

AVAILABLE: Library of Congress

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GEL'DERMAN, L.S. kand.tekhn.nauk; KULYAPINA, E.P., inzh.

Structure and properties of forgings in connection with the
conditions in which they were forged. Metallovedenie 3:349-
357 '59. (MIRA 14:3)

(Forging)

GOLDENKO, A.Ye. [Holdenko, A.IE.]; GEL'DERMAN, M.A. [Hel'derman, M.A.]

Attachment for the machining of the worms of caramel wrapping machines.
Kharch.prom. no.4:73-74 O-D '63. (MIRA 17:1)

GEIERMAN, M.A.; GOLDBERG, A. Y.

High-speed screw-in chuck, Washington (16) no. 13-2 Total
(MIRK 1727)

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CIA-RDP86-00513R000514620005-8

GOLDSTEIN, M. A.; GOLDBECK, A. Ya.

High-speed draw-in chuck. Rotational strength 14 no. 10:22
164.

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000514620005-8"

POLOVCHENKO, I.G., kand.tekhn.nauk; GEL'DFAND, V.I.

Automatic correction of the deviations of mixture batch weights
in charging open-hearth furnaces. Avtom.i prib. no.1:18-21
Ja-Mr '62. (MIRA 15:3)

1. Dneprovskiy metallurgicheskiy zavod im. Dzerzhinskogo (for
Polovchenko). 2. Ukrsprom (for Gel'dfand).
(Open-hearth furnaces) (Automatic control)

GEL'DFEL'D, B.S.; TSKHADADZE, G.O.

Collectors with plastic hulls for use in electric machines. Elek.
i tepl. tiaga 7 no.6:5-6 Je '63. (MIRA 16:9)

1. Nachal'nik konstruktorskogo byuro Tbilisskogo elektrovozostroitel'-
nogo zavoda im. V.I.Lenina (for Gel'dfel'd). 2. Nachal'nik
tekhnologicheskogo byuro Tbilisskogo elektrovozostroitel'nogo
zavoda im. V.I.Lenina (for Tskhadadze).
(Electric machinery)

GEL'DIYEV, O.

Gel'DIYEV, O.: - "Material on the study of Rotkina's disease in the city of Ashkhabad".
Ashkhabad, 1955. Turkmen Medical Inst imeni I. V. Stalin. (Dissertation for the
Degree of Candidate of Medical Sciences)

SO: Knizhnaya Letopis', No. 40, 1 Oct 55

Country : USSR
Category: Virology. Viruses of Man and Animals
Rickettsias

E

Abs Jour: Ref Zhur-Biol., No 23, 1958, No 103536

Author : Gel'dner, L. B.
Inst : Molotov Medical Institute
Title : Methods of Studying the Effect of Environmental
Factors on the Typhus Virus

Orig Pub: Tr. Molotovsk. med. in-ta, 1957, No 26, 202-204

Abstract: The experiments were performed by the method of
epidermal membranes. Only the conclusions are
presented in the article.

Card : 1/1

Gel'dner, L. B.
APPROVED FOR RELEASE: 08/23/2000 General Microbiology CIA-RDP86-00513R000514620005-8"

F

Abs Jour : Ref Zhur-Biol., No 13, 1958, 57452

Author : Gel'dner L. B.
Inst : Molotov Medical Institute
Title : Experiment of Vegetative Hybridization of Pro-
teus vulgaris on a Nutritive Medium Containing
Proteins of Rickettsia Prowazekii

Orig Pub : Tr. Molotovsk. med. in-ta., 1957, vyp. 26, 205-
207

Abstract : Two strains of proteus vulgaris and one strain
of coli bacillus were passed on a "rickettsia
medium" (a mixture of typhus infected lice gro-
und in a mortar and dissolved in physiological
solution). After 20 passages were carried out at
three 24 hour intervals both strains of proteus
began to agglutinate with the typhus serum in

Card 1/2

GEN'DONOV, I.B., doctor (Perm')

Role of Perm scientists in the inception and development of
medical microbiology in the Urals. Trudy Perm. gos. med. inst.
43:49-53 '63. (KIP: 12.6)

~~SECRET~~
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Tularemia. Poliski tygod. lek. 5:7, 13 Feb. 50. p. 266-9; contd.

CLNL 19, 5, Nov., 1950

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Tularenia; symptoms and clinical course. Polski tygod. lek. 5:8,
20 Feb. 50. p. 305-7; contd.

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CML 19, 5, Nov., 1950

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Yilmaz, "Cerebral A. in Thrombocytopenic purpura under the effect of the polyvinylchloride polymer and streptomycin. The surgical treatment of the syndrome of the PSS, combined with streptomycin therapy" (1957),

SC. 1955-1956, Vol. 7, no. 6, Section VIII (part 2).

GELDNER, Mieczyslaw

Proper approach to balneological therapy of sciatica in view of
experience with surgical treatment. Neurologia etc. polska 5 no.1:
69-76 Jan-Feb 55.

1. Z kliniki neurol. A.M. w Warszawie; kier. prof. dr. J. Chorobski.
(SCIATICA, therapy
balneother., relation to surg. treatment)
(BALNEOLOGY, in various diseases
sciatica, relation to surg. treatment)

BODRYY, M.; GUSEYNOV, M.; AGRETKIN, S.N., red.; ATALZHANOV, A., red.; BIRA, Ya.I., red.; CELUDYEV, A., red.; GOLOVKIN, A.V., red.; MAMEDKULIYEV, A., red.; KATALOV, Ch., red.; KHALIMURADOV, B., red.

Sovet Turkmestany. Soviet Turkmenistan. Ashkhabad, Turkmenskoe izd-vo, 1964. 103 p. [In Turkmen, Russian, English, and Arabic] (MIRA 18:4)

GEL'DYYEV, E.

Tectonics of the Chikishlyar region. Izv. AN Turk. SSR. Ser. fiz.-
tekhn., khim. i geol. nauk no.4:67-76 '63. (MIRA 17:2)

1. Institut geologii AN Turkmeneskoy SSR.

KHADZHINUROV, N.; GEL'DYEV, E.

Geological structure of the Kamyshldzha deposit. Izv. AN Turk. SSR.
Ser. fiz.-tekhn., khim. i geol. nauk no.4:121-123 '63. (MIRA 17:2)

1. Turkmenskiy filial Vsesoyuznogo neftegazovogo nauchno-issledovatel's-
kogo instituta.

GEL'DYEV, E.

Reservoir properties of the arenaceous-silt rocks of red beds in
the Okarem deposit. Dokl. AN Azerb. SSR 19 no.8:49-53 '63.
(MIRA 17:11)

1. Institut geologii AN AzSSR. Predstavлено академиком AN AzSSR Sh.
F. Mekhtiyevym.

GEL'DYYEV, K.

Q-3

USSR / Farm Animals, Cattle (Small)

Abs Jour: Ref Zhur-Biol., No 2, 1958, 7175

Author : K. Gel'dyyev

Inst : Not given.

Title : Saradzhinskiy Breed - Planned Grading Up of
Local Kurdyuk Sheep.

Orig Pub: S. kh. Turkmenistana. 1957, No 3, 38-42

Abstract: No abstract.

Card 1/1

GEL'DYYEV, Kh.

Some data from the experience of polyclinical examination of
workers at the S.M.Kirov Synthetic Rubber Plant. Trudy Vor.
med. inst. 47:88-89'62 (MIRA 16:12)

1. Kafedra organizatsii zdravookhraneniya Voronezhskogo medi-
tsinskogo instituta.

GEL'DYEV, Kh.

Incidence of disease with a temporary loss of working capacity
in chronic intoxication with styrene in industry. Zdrav. Turk.
8 no.1:36-38 Ja '64. (MIEA 17:5)

I. Iz kafedry organizatsii zdravookhraneniya Vsesoyuznogo
meditsinskogo instituta. (avtoreyuchim - prof. T.Ya. Tkachev).

GEL'DYIEVA, A.G.

Conditioned reflex changes in the phagocytic activity of leucocytes of the peripheral blood and the effect of cortical stereotype on that process. Izv. AN Turk. SSR no.2:65-69 '55. (MLR 9:5)

1. Turkmen'skiy gosudarstvennyy meditsinskiy institut imeni I.V. Statlina.

(LEUCOCYTES) (BRAIN)

GEL'DYYEVA, A.G. (Ashkhabad)

Cortical regulation of phagocytosis. Pat. fiziol. i eksp. terap.
6 no.6:40-44 N-D'62 (MIRA 17:3)

1. Iz kafedry patofiziologii (zav. - prof. V.A. Rusin) Turkmen-
skogo meditsinskogo instituta.

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Abcesses and phlegmna of the head and neck in children. Fel'd. i
akush. 26 no.9:16-19 S '61. (MIRA 14:10)
(NECK-ABCESS) (PHLEGMON)

GELEBOVICH, T A

USSR/Geochemistry
Biochemistry
Boron

Aug 1946

"Boron in the Sea," T A Gelebovich

"Trudy Biogeokhimicheskoy Lab" No 8

Analytic methods of determining small quantities of boron. History of the presence of boron in sea water; history of the presence of boron in sea organisms. Experimental data (boron in water, large salt lakes, marine plants, marine animals). Exchange between the sea and dry land; conclusions. Tables and bibliography.

3T35

GELEI, Anna

"International comparison of the proportions of investments"
by Luc de Vosghel. Reviewed by Anna Gelei. Stat szemle
41 no.2:214-216 F '63.

CSIKI, J.

CSIKI, J. Fauna and flora of some temporary stagnant pools in a meadow of
the Tisza Valley Mountains in Upper Hungary. I. Stagnant pools. In
German. p. 247.

Vol. 5, No. 3/4, 1954.

ACTA BIOLOGICA

SCIENTIA

Budapest, Hungary

See: East European Accession, Vol. 5, No. 5, May 1956

GELFI, J.

GELFI, J.

GHINI, J. Fauna and flora of some temporary stagnant pools in a meadow of
the Körzseny Mountains in Upper Hungary. III. Chilida. IV. Furte series.
in German. p. 259.

Vol. 5, No. 3/4, 1954.

ACTA BIOLOGICA.

SCIENCE

Budapest, Hungary

See: East European Accession, Vol. 5, No. 5, May 1956

Power Requirements for Rolling and for Mill Trains. A. Géleji. (Royal Hungarian Palatine-Joseph University, Publications of the Department of Mining and Metallurgy, 1940, vol. 12, pp. 192-212). Formulae for the power requirements for rolling rectangular and rail sections, and for the increase in the power due to the cooling of the rolled material are developed.
R. A. R.

5

11

Calculating the Forces Arising and the Power Requirements in the Mannesmann Tube-Rolling Process. A. Gelcji. (Royal Hungarian Palatine-Joseph University, Publications of the Department of Mining and Metallurgy, 1941, vol. 13, pp. 208-223). A method of calculating the forces involved and the power required in the Mannesmann process of rolling tubes is explained. The results obtained are in good agreement with the values obtained in practice. - R. A. R.

The Theoretical Problems Involved in the Design of Rolling-Mill Stands. A. Gileji. (Royal Hungarian Palatine Joseph University. Publications of the Department of Mining and Metallurgy, 1941, vol. 13, pp. 224-242). Methods of making the following design calculations are given: (1) Determination of the roll pressure when rolling rectangular sections; (2) determination of the bending moment and stresses in different roll stands; (3) determination of the elastic deformation in side frames and their effect on the rolling; and (4) determination of the permissible stresses and deformation in side frames. R. A. R.

121

Problems Relating to the Permanent Deformation of Rectangular Bars by Bending. A. Geleji, (Royal Hungarian Palatine-Joseph University, Publications of the Department of Mining and Metallurgy, 1943, vol. 15, pp. 225-245). A solution is offered to the problem of calculating the bending moment necessary to produce a given permanent deformation in a rectangular bar resting on two supports. Calculations of the power requirements of plate bending machines are also made. R.A.R.

POWER REQUIREMENTS of ROLL TABLES. A. Goleji. (Banyassati es Kohassati Lapok, 1948, vol. 6, May, pp.183-188). (In Hungarian). The author presents a method for calculating the acceleration and power requirements of roll tables. The application of the method is shown by an example. --S.G.

12

6-4

M

18

Calculation of the Deformation Resistance and of the Power Requirements in Rolling. A. Geleji, *Arch. Techn. Acad. Sci. Hungar.*, 1960, 1, (1), 78-109. (In German.)

G's theory of rolling practice (*Skriv. Arch. ungar. Wiss. Techn.*, 1947, 18, 336; *Met. Ind.*, 1947-48, 18, 336) is clarified and amplified. The theory is based upon the relative oscillatory motion of rolls and rolled material. A formula is derived for the deformation resistance. Simple assumptions lead to the deduction of formulae for the power requirements and roll-turning moments in rolling; in practical appp., these calculated data require multiplication by a factor dependent upon the percentage reduction of size produced by rolling. Experimental and calculated results for a large number of metals and alloys are in fairly good agreement. The theory of rolling with caliper rolls, i.e. non cylindrical rolls, is briefly discussed. J. S. G. I.

AIAA-SEA METALLURGICAL LITERATURE CLASSIFICATION

S *Typing, Stamping, Drawing, & Drawing*

Duration and Intensity of the Impact in Forging. A. Geleji. (Acta Technica Academiae Scientiarum Hungaricae, 1951, 1, 3, 299-317). [In German]. The kinetic energy of the hammer in forging is transformed on impact into useful work of plastic deformation and into losses associated with the elastic deformation and possibly vibrations of the base supporting the anvil. Three cases are analyzed: (1) A plastic mass is deformed by the simultaneous impact of two freely moving bodies which hit it axially from opposite directions; (2) the case in which the anvil is treated as a static elastic column of infinite length; and (3) the case in which the anvil is replaced by a flat-surfaced semi-infinite elastic medium. The duration of the impact is determined in each instance, and the energy dissipated in the base is calculated. From this the efficiency of energy transfer to the forged object is derived. - R. F.

GELEJT, MITR

V.2, No 11, Nov. 1953

Metals-Smelting, Reduction, &
Refining

12482* Copper Refining in a Rotary Furnace. (German.)

A. Giech and J. Schrey. *Acta Technica Academiae Scientiarum Hungaricae*, v. 3, nos. 3-4, 1952, p. 393-425.

Compares advantages of short and long furnaces. Photographs,
micrographs, graphs, tables, diagrams. 15 ref.

Geleji, A.

IK

v. 2, No. 11, Nov 1953

Mechanics - Secondary Working

12531* Extrusion and Punching Method. (German.) A.
Geleji, *Acta Technica Academia Scientiarum Hungaricarum*, v.
1952, No. 1-4, 1952, p. 273-292.
Presents theoretical analysis of structures and pressures. Micro-
graphs, graphs, drawings. 13 ref.

(B2)

CELEJIA

BTR

V.R. Nov. 1953 (No. 11)

Initials - Primary Working

H

12521* Graphic Method for Design in Drawing Pipes.
(German.) A. Celci and J. Schey, *Acta Technica Academiae Scientiarum Hungaricae*, v. 4, nos. 1-4, 1952, p. 347-361.

Prevents a graphic method by which pipe dimensions and drawing forces can be determined for each stage of the process.
Drawings, graphs, nomograms. 6 ref.

52

GELEJI, A.

"Effects of the Sixe of Rolls in the Cold Rolling of Metal Sheets and Strips
p. 217, ACTA TECHNICA ACADEMIA SCIENTIARUM HUNGARICAE, Vol. 7, No. 1/2, 1953
Budapest, Hungary).

SO: Monthly List of East European Accessions, L. C., Vol.2, No.11, Nov. 1953
Uncl.

(Approved for release under the
Freedom of Information Act)

3600. Grégl, A. Calculation of efforts and power demand in
the Ehrhardt process of making seamless pipe (in German). *Acta
Technica Hungarica* 7, 3/4, 177-204, 1953.

The basic principle involved is one of indirect extrusion of a
square billet of such size that it will slip into the round extrusion
cylinder and will completely fill the space in the cylinder when the
extrusion mandrel is forced into it. The force initially required to
push the mandrel into the billet is calculated on the basis that the
mandrel pressure is equal to the flow strength of the material.
Subsequent reduction is obtained by rolling with the mandrel in
place, or by drawing, in which the mandrel forces the extruded
 bloom through a series of dies.

The forces involved in these subsequent operations are calcu-
lated as a series of steps based on a consideration of three-dimen-
sional states of stress in the material as it passes through the rolls
or dies. The conditions of flow are based on a constant flow
stress σ_f .

The total work calculated includes the work of deformation,
the friction energy loss in the die, and the fracture energy loss
due to slippage on the mandrel.

R. G. Sturm, USA

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CIA-RDP86-00513R000514620005-8

GELEJI, A.

"Power Demand of Rolling in Shape Passes." p. 203, Budapest, Vol. 3, No. 9, September 1954.
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GELEJI, A.

✓ "Calculation of the Power Requirements for Rolling with Grooved Rolls. A. Geleji (*Acta Techn. Acad. Sci. Hung.*, 1984, 9, (1/2), 205-212, [in German]). In continuation of previous work (*ibid.*, 1980, 1, 78; *M.A.*, 19, 185) G. develops a theory which enables the power requirements for rolling metals with grooved rolls to be deduced. The power requirement comprises two components: (a) that necessary for shaping the rolled material and (b) that necessary to overcome friction set up in the grooves. The former depends on the reduction, the resistance to shaping, and the speed of rolling; the latter depends on: (1) the relative velocity of gliding of the rolls on the material being rolled, (2) the coeff. of friction and the rolling pressure, and (3) the mean resistance to shaping. The average coeff. of friction in the groove is less than the friction coeff. in blooming or plate-rolling.

- J. S. (I. T.)

CELESTI

HUNG

**Calculation of the Broadening and Forward-Slip Occurring in Rolling. A. Gélenj (Acta Techn. Acad. Sci. Hungar., 1954, 9, (34), 443-455). (In German). A math. theory of the broadening and forward slip occurring in the rolling of rectangular strips, between cylindrical rolls, is developed. A satisfactory agreement is found between theoretical and experimental results due to Siebel and Fanknecht (Mat. Kd. Inst. Eisenforsch., 1930, 12, 223) and to G. Gere, U.S. Natl. Inst. Eisenforsch., 1930, 12, 223) and to G. Gere, U.S. Natl.*

700' 12/00 C. J. S. G. T.

GELEJI, A.

"Polish Commemoration of the Work of Dr. Jozsef Jaky-Kessuth Frize
Wigner, Professor at the Technical University in Budapest, Member of
the Hungarian Academy of Sciences", p. 45*. (ACTA PHYSICA, Vol. 6,
No. 3/4, 1954, Budapest, Hungary)

SC: Monthly List of East European Accessions, (EPA), 13, Vol. 4,
No. 1, Jan. 1955, Uncl.

REF ID: A

Distr: 4E2c/4E2b(w)

Book—654. Galil, A. Computation of forces and power in plastic forming. (1958) Betechnung der Kräfte und des Arbeitsbedarfs bei der Formgebung im bildenden Zustande der Metalle), 2nd revised and enlarged ed., Budapest, Akadémiai Kiadó, 1959, 413 pp.

Book is a revision of author's 1948 edition of the same title. The essential chapters are on various phases of plastic as well as drawing operations for rods, wires, and tubes, combination of cold-drawing and cold-rolling, expanding and the handling and deep-drawing of sheet metal. The comprehensive treatment of experimental results and design information is based on the 208 references listed in the text. Chapter I is a brief review of total strain theory which is used to establish the design equations found throughout the book. Although author states that the book is primarily for use by machine and tool designers, it is regrettable that he did not include the slipline solutions or incremental strain solutions of the many papers published during the past years on experimental and theoretical work in the field of plasticity.

J. Friesch, USA

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2

CIA

GELEIT 1/14

H U N G

9463* Power Requirement and Forming in Extrusion and
Die-Forging. Kraftbedarf und Förmvorgänge beim Strang-
pressen und beim Pressen im Gesenk. (German.) A. Gekli-
pács, Acta Technica Academiae Scientiarum Hungaricae, v. 10, nos.
1-2, 1955, p. 187-220.

Verification of the theory of extrusion, for newly established by
the author; calculation of forces developed in die-forging. Dia-
grams, graphs, photographs. 14 ref.

GELEJI, A.

K8. Determination of the forces required for the plastic deformation of aluminum and aluminum alloys.
Metall. Rukovodstv. Vol. 1C (88), 1955, No. 12, pp. 564-570, 20 figs, 1 tab.

The results obtained by computational methods established on the basis of the author's theory of plasticity have been subjected to comparison with his own tests and those conducted by Baulke, Lucas, Bach, Bernhoef and Pearson. It was verified that the acting forces and deforming work could be established by calculations in all branches of plastic deforming processes occurring in practice for both aluminum and aluminum alloys as well. These calculations can be carried out with very good practical exactitude whenever sufficiently accurate data on the physical properties of the material subject to plastic deformation are available for substitution in the formulae. These properties are resistance to deformation, the friction factor and the specific work required for producing internal displacements of material referred to unit volume.

GELEJI, A.

✓ Computation of Stresses arising in Foundations of Power
Driven Forge Hammers in Operation. A. Geleji and G.
Dobrovil. (Acta Techn., 1955, 11, (1-2), 113-120) (in Ger.
man). The paper is a further development of " Duration and
Efficiency of the Thrust Process in Forging " published by [redacted]
the author (Acta Techn., 1951, 1, 299-318), and deals with a
new method of evaluating the stresses as a function of the
design and mode of performance of the power hammers and
their bases. — P. Y.

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for

6000 ft. A.

Forces Developed and the Power Demand for the Cold Pilger-Rolling of Tubes. A. Goleij (Acta Tech. Acad. Sci. Hungar., 1958, 11, (3/4), 301-316) [In German]. Math. and graphical methods of calculating, with sufficient accuracy for practical purposes, the forces developed and the power requirements for the cold pilger-rolling of tubes (see Zacco, Tekn. Tidskr., Bergteknisk, 1937, 67, 89) are developed. A description of the process is given. 0 ref.—J. S. G. T.

MN
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GELEJI, A. (Prof. Dr.)

Hungary

VIII. Berg- und Hüttenmännischer Tag in Freiberg

Die Berechnung des mittleren Verformungswiderstandes bzw. Walzdruckes beim Warm- und Kaltwalzen von quadratischen Stangen und blechförmigen Körpern.

SO: Neur Hütte, September 1956, Unclassified.

SELEJJI, A

✓ 53. A metal foil rolling mill drive with cascade-connected asynchronous motors (In German) V. Uray,
A. Seleji. Acta Technica Academiae Scientiarum
Hungaricae. Vol. 14, 1956. No. 3-4, pp. 463-476.
5 figs.

glee!
The paper treats the electrical part of a metal foil rolling mill with cascade-connected asynchronous motors driving the rolls and the colling unit. This new type of strip mill drive permits the elimination of costly and complicated automatic mechanisms retaining nevertheless all their advantages.

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SELEJI, L. and others.

Measurement and calculation of the rolling pressure and of the power demand on the pilger tube-rolling mill. In German. p. 205.
(Acta Technica. Vol. 15, no. 1/2, 1956, Hungary)

SO: Monthly List of East European Acquisitions (SEAL) LC, Vol. 6, no. 6, July 1957, Uncl.

GELEJI, A.

ARCSA 8

ACTA
ACADEMIE
SCIENTIARUM
POLONICARUM
VOL. XXIII, 1952, 1-2, 11-17

3

COMPUTATION OF THE MEAN DEFORMATION RESISTANCE AND OF THE ROLLING
PRESSURE ARISING AT COLD AND HOT ROLLING OF SQUARE RODS AND SHEETS

Aut. & Struck
Prof. A. GELEJI
Member of the Board of Academy of Sciences

SUMMARY

The paper shows a method for computing the deformation resistance at hot and cold rolling. For computing the deformation resistance serves the formula

$$k_m = k_f \left(1 + C \cdot \mu \cdot \frac{h}{b} \cdot \frac{1}{v} \right), \quad (1)$$

where the coefficient C depends at cold rolling as well as at hot rolling from the ratio $\left(\frac{h}{b}\right)$.

The function $C = f\left(\frac{h}{b}\right)$ has been determined empirically (Fig. 2).

At cold rolling the compressed gripping arc is increased by the flattening of the rolls. This flattening causes an increase of the rolling pressure and the deformation resistance. For computing the increased gripping arc serve formulas (11) and (12).

The practical range of usefulness and the precision of the method can be seen from the Tables.

These Tables permit also to draw valuable conclusions on the size and the variation of the coefficient of friction depending on rolling pressure and rolling speed.

18

Distr: 4E2c/4E2d(w)

130. New theory of rolling. (In German) A. Gelejs.
Acta Technica Academiae Scientiarum Hungaricae, Vol. 19, 1957, No. 1-2, pp. 109-243, 32 figs.

The most important theories of rolling (Kármán, Orowan and Meiss) are dealt with briefly and critically. It is pointed out that these theories do not take into consideration the circumstances which produce the phenomena accompanying rolling (enlargement and forward slip) the key to the proper interpretation and determination of the forces arising in the rolling gap. The new theory explains the causes of enlargement and forward slip and at the same time points out the forces that must be considered in the determination of the resistance to deformation. The theory is briefly summarized in the following: At any point of the compressing surface of the rolls the resistance to forming in rolling consists in the total yield strength of the rolled material and in the compressive stress acting on the vertical cross section of the piece at the point in question. This compressive stress, acting in the direction of the axis of the rolled piece, consists of two components of different origin. One component derives from the fact that the frictional stresses arising in the rolling gap between the rolls and the piece produce, in the direction of the longitudinal axis of the piece, two compressive forces of opposite sign balancing each other in the neutral cross section. The other component of the compressive stress acting in the direction of the axis of the piece stems from the fact that when the column of material is compressed between the cross section of the entry section and the neutral section in the rolling gap, the side of this column of the material that coincides with the neutral cross section exerts pressure

on the part of the piece behind the neutral cross section, extruding it from between the rolls through the cross section of the exit at a velocity higher than the peripheral velocity of the rolls, that is, with a forward slip. All three compressive stresses attain their maxima in the neutral cross section. The surplus resistance to forming required for deforming the vertical cross sections in the rolling gap (for producing internal displacements of material) should be added to the resistance of deformation determined from the yield strength and the compressive forces acting in the direction of the longitudinal axis of the piece. The theory is valid for both hot and cold rolling.

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GELEJI, Á.

Report on the operations of the Section of Technical Sciences of the Hungarian Academy of Sciences to the 1958 General Assembly of the Hungarian Academy of Sciences; also, remarks by A. Tarczy-Hornovh and others. p.111.

Magyar Tudományos Akadémia. Muszaki Tudományok Osztálya. KÖZLEMÉNYEI. Budapest, Hungary. Vol. 23, no. 3/4, 1959.

Monthly List of East European Accessions (EEAI), LC. Vol. 8, No. 9, September 1959
Uncl.

GELEJI, A.

Calculation of the rolling torque. In German. p.447.

ACTA TECHNICA. Budapest, Hungary. Vol. 24, no. 3/4, 1959.

Monthly List of East European Accessions (EEAI), LC. Vol. 8, No. 9, September 1959
Uncl.

18(5)
AUTHOR.

Geleji, Aleksander, Professor, Doctor of Engineering

POL/39-26-3-4/13

TITLE:

Moments and Power During the Rolling Process

PERIODICAL:

Hutnik, 1959, Vol 26, Nr 3, pp 105-110 (Poland)

ABSTRACT:

Calculations for determination of moment and power during rolling process are made. The term of the correction coefficient η , which means the ratio between the measured and the calculated rolling moment is dealt with. Figures 1 and 2 show an exact diagram of the rolling process as well as of the power achieved by it, and the necessary dimensions for determination. The rolling power "L" can be determined by equations according to formula (16). The exchange into values of km (medium plastic resistance) is done by formula (17). By formula (11), the rolling moment is determined. From these equations results "F" (formula 12). Then the coefficient η is introduced (formulae 19, 20, 21). Known values for the factor "u" mentioning the references are shown in figure 3 (hot rolling aluminum 99.5%). In figure 4 (rolling

Card 1/3

✓

Moments and Power During the Rolling Process POL/39-26-3-4/13

Card 2/3

of five types of steel), and in figure 5 (various aluminum alloys and nickel-steel). Figure 6 shows the ratio that the medium value of η bears to the degree of deformation. From formulae 18, 18a, and 18b, different values for η can be taken for information. Further equations for the determination of the position of the partial (neutral) plane are given by the author. Figure 7 shows an exact scheme for better understanding of the determination. According to the author this determination is of special importance as the main problem in the rolling process is to reduce the plastic resistance. As can be seen from the calculation, the moment of the plastic resistance is before the neutral plane (equations 30 and 31), i.e. behind the neutral plane (equations 33 and 34). The summary moment is obtained by equation 35, the maximum value for the plastic resistance in the neutral plane by equations 38 and 39. According to the author the value of the factor η can be determined by equations 19 and 36 (see formulae 46 to 49).

✓

Moments and Power During the Rolling Process POL/39-26-3-4/13

There are 5 graphs, 2 diagrams and 6 German references.

ASSOCIATION: Czlonek Zwyczajny Węgierskiej Akademii Nauk Budapest
(Member of Academy of Sciences Budapest)

SUBMITTED: October 16, 1958

✓

Card 3/3

OKLEJI, A., prof., dr., ing., Mitglied der Ungarischen Akademie der Wissenschaften

Calculating the force demand in the dies at press forging; Report No. 20 of the Working Community for Metallurgy of the Hungarian Academy of Sciences. Acta techn Hung 34 no.1/2:185-197 '61.

GELEJI, A., ord. Mitglied der Ungarischen Akademie der Wissenschaften
DEVENYI, G.; GULYAS, J.

Bar extrusion experiments. Acta techn Hung 44 no.3/4:437-445
'63.

1. Redakteur, "Acta Technica Academiae Scientiarum Hungaricae,"
(for Geleji).

L 31348-66 EWP(w) EM

ACC NR: AT6021141

SOURCE CODE: HU/2504/65/050/000/0069/0080

32

B+1

AUTHOR: Goloji, A.--Gelei, A.ORG: Working Group for Metallurgy, MTATITLE: Elastic-plastic bonding of circular rodsSOURCE: Academia scientiarum hungaricae. Acta technica, v. 50, 1965, 69-80TOPIC TAGS: bonding strength, metal bending, elasticity, plasticity

ABSTRACT: The technical literature lacks a detailed analysis of the elastic-plastic bending of rods with circular cross section. Studies were conducted to establish whether an exact numerical evaluation of the problems involved is feasible. It was found that great difficulties exist; however, it was possible to develop an approximating technique which permits the problems to be solved at an accuracy of $\pm 1-5\%$. The equations involved in this technique were derived and presented. Orig. art. has: 6 figures and 52 formulas. [JPRS]

SUB CODE: 20, 13 / SUBM DATE: 07Oct63 / OTH REF: 004

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PAGE 1 BOOK INFORMATION

SER/993

International symposium on macromolecular chemistry. Moscow, 1960. 14-15 May 1960. 61 abstracts. Section II. Section II. (International symposium on macromolecular Chemistry. Held in Moscow, June 1-13; Papers and Summaries). Section II. [Moscow, Izd-vo Akad. Nauk SSSR, 1960] 559 p. 1,500 copies printed. Symposium Agency: The International Union of Pure and Applied Chemistry. Commission on Macromolecular Chemistry. Tech. Rep. 24. Paris, France.

Techn. Rep. 24. Paris.

PURPOSE: This book is intended for chemists interested in polymerization reactions and the synthesis of high-molecular compounds.

CONTENTS: This is Section II of a multivolume work containing papers on macromolecular chemistry. The papers in this volume treat mainly on kinetics of various polymerization reactions facilitated by different catalysts or induced by radiation. Among the research techniques discussed are electron paramagnetic resonance spectroscopy and light-scattering intercalation. There are summaries in English, French and Russian. The personalities are mentioned. References follow each article.

| | |
|---|----|
| Partchik, I.A., and I.B. Blits. (Russia). Processes of Polymerisation and Crystallization in Polymeric Suspensions 469 | 19 |
| Volobouev, A.V., G.I. Ponomarenko, S.M. Shnirer, and A.F. Semenov (Russia). The Polymerisation Process in the Solid Phase 465 | |
| Gorobets, Yu. A., S. Shnirer, I. Solin, and N. Solin (Russia). Mechanics of the Polymerisation of L-Glutamate in the Presence of Propanoic Acid 477 | |
| Chirciwodzka, E., B. Gotskevich, and W. Wodarczyk (Poland). Polymerisation of Carboxylic, Fatty and Saponified Fatty Acids in the Presence of Their Sodium Salts in Nonsolvent Solvents With Calcium Chloride As an Activator 497 | |
| Vassil'ev-Smirnov, I.M., M. Karpov-Gorev, and R. Matysheva (Russia). Investigation of Nalatop-Phthalate Polymerisation During the Polymerisation of Dextrose, L-Glutamate, and D-Glucosamine (Russia). Kinetics of the Polymerisation of Dextrose, L-Glutamate, and D-Glucosamine (Russia). 504 | |
| Leszczynski, J., and J. Chirciwodzka (Poland). Kinetics of the Polymerisation of Dextrose, L-Glutamate, and D-Glucosamine (Russia). 521 | |
| Brzozowski, P., Milt, and L. Sestak (Czechoslovakia). Use of the Extrapolation Method in Computing Data on Light-Scattering For the Case of Constitutive Constants. Observation of Polymerisation in Particles 524 | |
| AVAILABILITY: Library of Congress 524 | |
| REFS: 19 | |
| Brooker, S.I., R.J. Morello, R.J. Terrell, and S.H. Linke-1 (USA). Study of Some Details of the Mechanism of Polymerisation Under the Action of Complex Catalysts 572 | |
| Fedorov, V.N., S.Ya. Kacser, E.M. Serebren, and M.G. Ovcharenko (USA). Stereospecificity and the Optical Properties of Polymers 578 | |
| Brzozowski, J.M., Yu. Yu. Gorobets, and O.J. Zilberman (USA). The Heterogeneity of Polymers and Methods of Study 589 | |
| Abram, A.D., A.F. Shnirer, M.F. Iakimova, and L.P. Melnikova (USA). On Carbonyl and Carbamate Polymerisation Mechanisms Under the Effects of Some Solvents 590 | |
| Leszczynski, J., and J. Sestak (USA). Polymerisation Process in Insoluble Molecular Dispersions 595 | |
| Wojciechowski, L., Milt, and L. Pfe (Czechoslovakia). Electron of the Polymerisation of Paraffinyls 602 | |
| Vassil'ev, I.M. (Czechoslovakia). On the Mechanism of Ionic Polymerisation 602 | |
| Chirciwodzka, E., and A. Blits (Czechoslovakia). On the Role of Nonpolar Compounds in the Cationic Polymerisation of Isobutyrylone 612 | |
| Chirciwodzka, E., and A. Blits (Czechoslovakia). On the Cationic Polymerisation of Isobutyrylone 612 | |

Geleji, F.

2 May

78. Mechanism of copolymerization of butadiene
with styrene in the presence of reducing agents.
Geszti and G. Tsvirkub. Vegyipari Kut. Int. Kft.,
1964, 4, 211-6; Ref. Zkr. Khim., 1958, abe. 22-26.
In Hungarian. Using polarographic and conductometric methods, the authors investigated the reactions taking place during the "maturing" of a solution containing ions Fe^{3+} and $P_2O_7^{4-}$ which is used as an activator in redox systems containing sugar. At 60°C the maximum quantity of Fe^{3+} (3/4) gives rise to an iron-pyrophosphate complex. As required by theory, the rate of formation of the complex increases with temperature. Hydrolysis of the pyrophosphate ions was not observed.
352D21MD23.1211

GELEJI, Frigyes

Present situation of the manufacture of synthetic fibers and the trend of its development. Magy kem lap 15 no.4:149-156 Ag '60.

1. Szervesvegyipari és Muanyagipari Kutato Intezet.

GELEJI, Frigyes; LEVAI, Gyula; MIGRAY, Emod

Castor oil as a raw material of the chemical industry. Magy kem
lap 15 no.7:298-303 Jl '60.

1. Szerves Vegyipari es Muanyagipari Kutato Intezet.

GELEJI, Frigyes

What is the cause for the characteristic rustling and sticking
of nylon underclothes? How can it be stopped? Elet tud 15
no.39:1218 25 S '60.

1. Muanyagipari Kutatointeset munkatarsa.

GELEJI, Frigyes

The "well-combed" molecules. Elet tud 17 no.30:935-938 29 J1
'62.

GELEJI, Frigyes

What is the advantageous property of "Terylene" plastic?
Elet tud 15 no.14:418 3 Ap '60.

1. Muanyagipari Kutato Intezet osztalyvezetoje.

KOVACS, Laszlo; GELEJI, Frigyes

Polyamide sieve fabric-coated filter pipes. Hidrologiai kozlony
40 no.1;54-57 F '60.

GELEJI, Frigyes

Plastic foils. Elet tud 16 no.44:1395-1398 29 0 '61.

ODOR, Gezane; GELEJI, Frigyes

Copolymerization of polycrylonene fibers by the method of
preliminary radiation with ^{60}Co , Magy kem lap 17 no.5:221-226
My '62.

1. Muanyagipari Kutato Intezet, Budapest.

HOLLY, Sandorne; GELEJI, Frigyes

Synthesis and investigation of modified polyesters. Magy kem lap
18 no.7:324-327 Jl '63.

1. Muanyagipari Kutato Intezet.

GELEJI, Frigyes

Multi-purpose plastic materials. Elet tud 18 no.37:1175-1178
15 S '63.

GELEJI, Frigyes; DUTKA, Gyorgy

Fiber formation from polypropylene. Magy textil 15 no.11:
506-507 '63.

1. Muanyagipari Kutato Intezet.

GELEJI, Frygyes; SZABO, Karoly; ODCR, Gezane

Possibilities for changing the properties of polypropylene
fibers. Magy textil 17 no.2:64-66 F '65.

1. Research Institute of the Plastics Industry, Budapest.

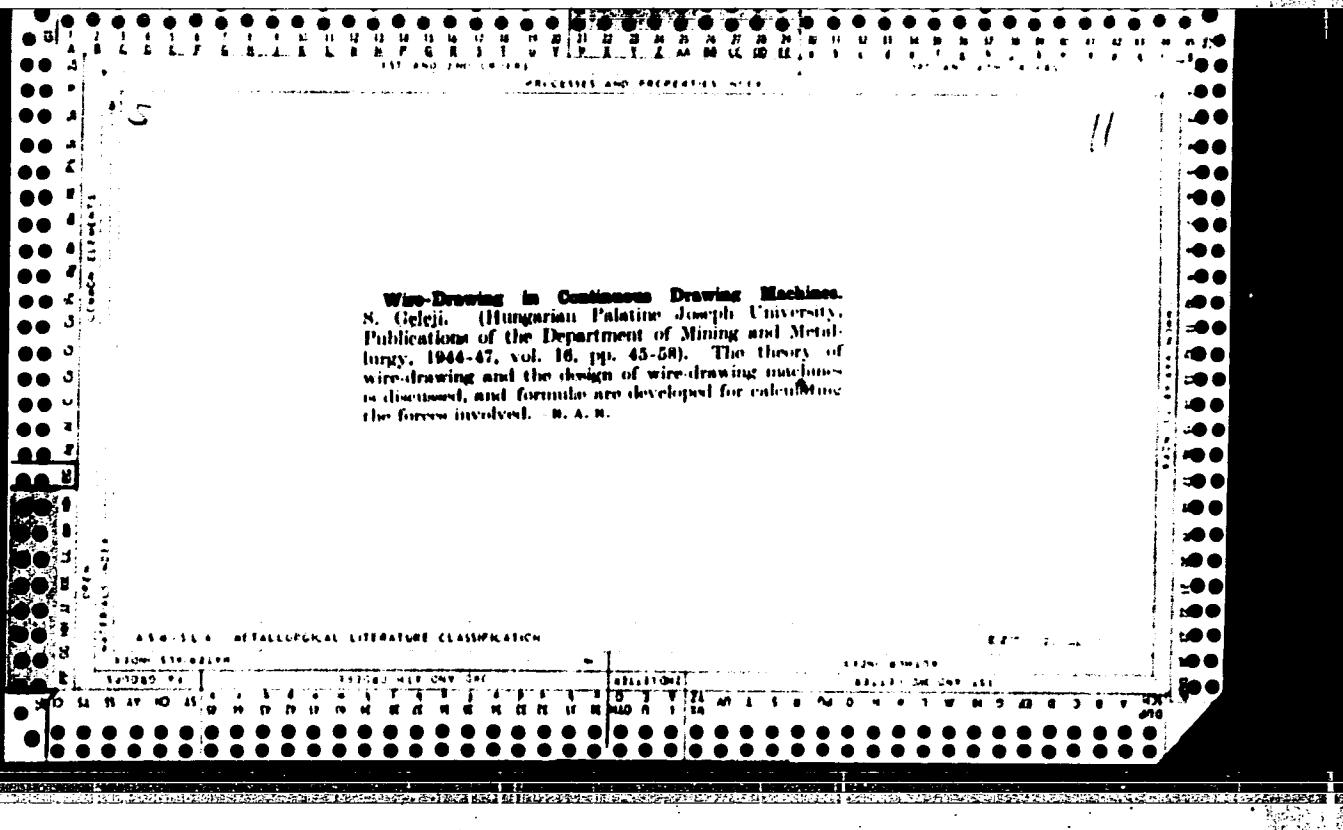
ODOR, Gezane; GELEJI, Frigyes

Improving the colorability of polypropylene fibers by exposing them to radiation. Magy textil 17 no.3:121-123 Mr '65.

1. Research Institute of the Plastics Industry, Budapest.

Fuel consumption in metallurgical furnaces and the
temperature of the flame area. Sándor Galajt. Adógyűjts.
Rohdiss. Lapok 60, 378-RM (1930). Mathematical formulas
are given for calcn. of the probable fuel consumption and
the temp. produced.
S. S. de Finilly

ASTM SLA METALLURGICAL LITERATURE CLASSIFICATION



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Ref. S. Udoft, "Bending of L- and U-profile from sheet" (in English), *Fold-Back List*, Budapest (Magyarország), April, 1947, no. 1, pp. 11-24.

In this paper the author develops a theory for the forces required to form sheet metal into bent angles or U-shapes.

After taking exception to the accuracy of Neubauer's formula for the required bending force, formulas are presented for the bending moments, portion of thickness subjected to elastic deformation, formed radius, total forming load required, etc. Experimental data are presented in chart form and compared to theoretical curves.

E. A. Beittner, Jr., USA

12

THE CALCULATION OF THE POWER REQUIREMENTS OF ROLLING MILLS. S. Galadj. (Bunyaessati es kohasszati Lapok, 1948, vol. 3, Dec. 15, pp. 315-318). (In Hungarian). Formulae are derived for calculating the power required in rolling mills when rolling square, oval, and round sections. The formulae given in this paper are based on an equation developed in a previous paper by the author (see Journ. I. and S.I., 1948, vol. 160, Oct, p. 225). The values obtained by calculation were in good agreement with results obtained experimentally in a case which is cited. E.G.

G-4

AMSLA METALLURGICAL LITERATURE CLASSIFICATION

GELEJI, SANDOR.

Aluminum handbook; course materials. illus., maps, bibl., tables (part fold.)
(Mernoki Tovabbkepzo Intezet, 1949. 687 p. Budapest)

SO: Monthly List of East European Accession (EEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

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4

Calculation of power requirements of rolling mill. A. G. Clark
(London, 6 October 1900, 1900, 8, 216-218; J. Iron Steel
Inst., 1900, 80, 110).—Formulas for calculating the power required
when rolling square, oval, and round sections are derived. Calc. and
experimental values are in good agreement. R. B. Clarke.

GELEJI, Sandor

Kohogep tan [Foundry machinery] Budapest, Tankonyvkiado, 1950. 478 p. diagrs.,
tables. Bibliography: p. [471]-473.

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741.46
.63

12

Development Trends in the Rolling of Steel. S. Galaj (banyaszati '58 Kohuszati Lapok, 1950, vol. 5, Feb.-Mar., pp. 203-215). [In Hungarian]. This is a general paper on modern rolling-mill practices. Increase of the efficiency of rolling mills, mechanization, and quality improvement are discussed. It is emphasized that the present tendency is to replace individual, separately controlled stands by roll trains which are centrally controlled. Particular attention is paid to methods applicable for production on a relatively small scale. In the discussion Mr. Letmayer pointed out that it would be advantageous to apply "minimair cold-rolling stands for producing thin sheets and transformer sheets; information on these stands is given. -- G.

G-4

AIA-11A METALLURGICAL LITERATURE CLASSIFICATION

S

*New Criterion. B. (Int). (Kohdeoski Logos, 1901, 6.
Nap., 187-209). [In Hungarian]. In contrast with the
existing formulas for calculating the forces involved in bar
extrusion, which are unreliable for practical application, the
author presents a new formula which accords reasonably well
with experimental results. -- I. W.*

Hungarian Technical Abst.
Vol. 6 No. 1
1934

1934

539-4016
68. The effect of the size of rolls on the cold rolling
of metal sheets and strips (In German) S. Gáspár
(Acta Technica Academiae Scientiarum Hungaricae Vol
7, 1933, No. 1-2, pp. 217-223, 4 figs.)

It has been proven in the practice of sheet rolling that the smaller the diameter of the work rolls the less resistance is encountered in rolling. This is explained by the fact that smaller diameter rolls undergo less flattening than large diameter rolls. The degree of flattening depends on the rolling pressure, i.e. on the resistance to forming in the gap between the rolls. On the other hand, the longer the arc of contact the greater the resistance to forming, however, with identical reductions in the thickness the smaller the diameter of the rolls the shorter the arcs of contact. With flattening rolls both the length of the arc of contact and the resistance to forming increase. The degree of flattening and thus the arc of contact may be calculated by the formula of the resistance to forming and by the Hertz formula for the flattening of rolls pressed against each other. With the help of the thus determined arc of contact the resistance to forming and the pressure of rolling can be computed with adequate precision for the rolling of thin sheets.

S. G.

HUNG.

Power demand of rolling in plates. (1) Calculated
S. S. S. (Acta Technica Academiae Scientiarum
Hungaricae) Vol. 6, 1954, p. 413-414.
(7 figs.)

Based on previously published papers, the author elaborated a method of calculating the power demand of rolling in grooved rolls. The point of departure is the fact that the power demand of rolling actions consists of two components: the power needed for forming proper, and the power consumed by friction arising in the groove. The power demand of forming depends on the reduction per pass, the material to be rolled, forming, and reduction per pass, the mean reduction of thickness in the pass; the mean relative rolling velocity is computable from the difference between the mean velocity of the working circumference of the groove and the speed of rolling. The mean coefficient of friction arising in the groove is less than the coefficient of friction in blooming or plate rolling because at no point of contact does the greasy skin touch the surface of the pass or the rolls.

coefficient of kinetic friction, which is always lower than the coefficient of static friction, must be taken into account.

GELEJI, S.

GELEJI, S. Determination of needs for power and performance in making
pipe by the Fhrhardt method. p. 206.

Vol. 12, no. 1/4, 1954, Budapest, Hungary KÖZI MÉLYVÍZ

SO: Monthly List of East European Acquisitions, (FEAL), LC, Vol. 5, No. 3,
March, 1956